DOCUMENT RESUME

ED 022 000 VT 004 403

UTILIZATION OF MOBILE FACILITIES FOR DEVELOPMENT OF ENTRY WORK SKILLS FOR ARKANSAS' RURAL UNEMPLOYED AND LOW INCOME EARNERS, A FEASIBILITY STUDY.

Nevada Univ., Reno. School Planning Lab.
Pub Date Jul 67
Note- 46p.
EDRS Price MF-$0.25 HC-$1.92
Descriptors-*ADULT VOCATIONAL EDUCATION, ECONOMICALLY DISADVANTAGED, FEASIBILITY STUDIES, MOBILE EDUCATIONAL SERVICES, *MOBILE LABORATORIES, OCCUPATIONAL CLUSTERS, *RURAL AREAS, *UNEMPLOYED
Identifiers- Arkansas

Data were gathered through personal interviews to ascertain the feasibility of using mobile training facilities for adults who were unemployed and underemployed in rural Arkansas. Mobile facilities which had been developed for various purposes were reviewed. Recommendations included that (1) a 1-year pilot field test of selected facilities be made, (2) a 6-month design and development period be allowed for the program and the mobile facilities, (3) mobile units be developed for an occupational exploratory program and for a training program, (4) the project be administered by the Vocational Division of the State Department of Education, and (5) to reach the greatest number of trainees, the project include the job clusters. Recommended clusters were (1) household appliance repair, (2) garment and dry cleaning, (3) general manufacturing mechanic's helper, (4) small gasoline engine repair, (5) farm equipment maintenance, (6) motel, hospital, and nursing home housekeeper, and (7) service station attendant. A $172,200.00 budget was proposed for the pilot field experiment. A bibliography and selected examples of operative mobile units are included. (EM)

MOBILE FACILITIES FOR ENTRY WORK SKILLS

MOBILE FACILITIES FOR ENTRY WORK SKILLS

MOBILE F ORK SKILLS

MOBILE FA WORK SKILLS

MOBILE FAC K SKILLS

MOBILE FAC K SKILLS

MOBILE FA RK SKILLS

MOBILE FA ORK SKILLS

MOBILE FA ORK SKILLS

MOBILE F WORK SKILLS

MOBILE FACILI WORK SKILLS

MOBILE FACILITIES FOR ENTRY WORK SKILLS

MOBILE FACILITIES FOR ENTRY WORK SKILLS

ED022000
VT004403
VT004403

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

A FEASIBILITY STUDY.

UTILIZATION OF MOBILE FACILITIES FOR DEVELOPMENT OF ENTRY WORK SKILLS FOR ARKANSAS' RURAL UNEMPLOYED AND LOW INCOME EARNERS

JULY 1967

A FEASIBILITY STUDY

UTILIZATION OF MOBILE FACILITIES FOR DEVELOPMENT OF

ENTRY WORK SKILLS FOR ARKANSAS' RURAL UNEMPLOYED AND LOW INCOME EARNERS

Prepared by

Nevada School Planning Laboratory

University of Nevada, Reno, Nevada

Dr. J. Clark Davis	*- Director of Laboratory*
Dr. Thomas T. Tucker, Jr.	*- Consultant*
Dr. Robert McQueen	*- Consultant*
Mr. Albert Seeliger	*- Consultant*
Dr. Albert Riendeau	*- Consultant*
Mr. Warren McNamee	*- Architectural Consultant*

July 1967

ACKNOWLEDGEMENTS

This study is the result of a deep and abiding interest in the welfare of the people of the State of Arkansas manifested by Governor Winthrop Rockefeller who gained the cooperation of Mr. Harold Gores, President of the Educational Facilities Laboratory of the Ford Foundation. For their interest and contributions the people of Arkansas should be grateful.

In preparing this report the consultants wish to acknowledge both Mrs. Mary McLeod and Dr. John Peterson of the Governor's office for their significant contributions to the study.

Without the cooperation, assistance and information provided by Mr. A. W. Ford, Commissioner of Education for the State of Arkansas, and Mr. J. Marion Adams, Associate Commissioner of Education for the State of Arkansas, this study would have been most difficult, if not impossible, to develop. These men are to be strongly commended for their efforts over many years to increase the educational opportunities, both academic and vocational, for the children, youth and adults of the State of Arkansas. To them the consultants are most grateful.

A number of other people provided information and assistance to the consultants and each is due a sincere expression of appreciation. Their names are to be found elsewhere in this report.

PART I

A PROFILE OF ARKANSAS' RURAL UNEMPLOYED AND LOW INCOME EARNERS

INTRODUCTION

For most of its history a significant proportion of Arkansas' population has been relegated to a subsistence level income with little more than a marginal education. This combination of factors has had the twin unfortunate effects of causing Arkansas, on the one hand, to expend large sums of money for welfare programs and, on the other, to lose great amounts of revenue which would have been realized through taxation had these people been earning incomes commensurate with their true abilities to do so. If the heavy burden of low income families continues to rest on Arkansas it will stifle the state's struggle to gain economic parity. It therefore seems imperative that a concerted effort be launched by the State of Arkansas to identify a positive direction by which low income families may break through the bonds which for so long have tied them to economic impoverishment.

In January 1967, Governor Rockefeller discussed with Dr. Harold Gores, President of the Ford Foundation's Educational Facility Laboratory, the possibility of funding a feasibility study of the use of mobile facilities to upgrade work skills of rural low income wage earners. A sum of $10,000 was provided by the Educational Facilities Laboratory to undertake the Mobile Facility Study. The responsibility for this study was assigned to the Arkansas State Department of Education. Commissioner A. W. Ford, in February 1967, brought together the persons listed below:

Mrs. Mary McLeod
Dr. John Peterson, representing Governor Rockefeller
Mr. J. Marion Adams, Assistant Commissioner for Vocational Education
Mr. J. Ruppert, Director, Trade and Industrial Education
Dr. J. Clark Davis, Nevada School Planning Laboratory

They discussed the development of a plan of action leading to the implementation of the feasibility study. It was agreed by the above group that the specific problem to investigate was the feasibility of providing some type of mobile facility with equipment and skilled teacher-technicians for the mobile unit. It was proposed that this unit move into rural areas of Arkansas enabling people to learn marketable skills to which they quite possibly might not be introduced through more traditional educational media.

The mobile facility concept was to be directed toward three groups of people.

1. Marginal farmers dwelling and working on very small acreages providing minimal incomes.

2. The Negro low income rural population.

3. Young people who are school dropouts and live in the rural areas with little hope of securing a worthwhile job due to lack of education and the absence of any saleable work skill.

With the foregoing as a frame of reference, the Arkansas State Department of Education

entered into an agreement with Dr. J. Clark Davis of the Nevada School Planning Laboratory to direct the feasibility inquiry and to present the results of the study, with recommendations, to Arkansas Commissioner of Education A. W. Ford.

The purpose of the pages that follow will be to assess the problems of the rural low income families as well as the unemployed and to offer a possible solution through the development of skills aimed at increasing their economic well being. At the same time, this would result in contributing to the general development of small towns and cities throughout the State of Arkansas.

PROBLEM

The consultants were asked to determine the feasibility of utilizing some type of mobile education facility with which to offer instruction to adult unemployables and those who are underemployed in the rural areas of Arkansas. The facility would seek to impart marketable skills to both groups.

Data pertinent to the study were gathered via personal interviews with many people and at numerous institutions. Interview questions were developed to elicit information necessary to make decisions concerning the feasibility of the mobile training concept.

The following sample items reflect the type of questions asked of informants:

1. What are the major characteristics of the rural unemployed, i.e. their sex, age,

race, education level, and work history?

2. *What are the employment opportunities open to persons with minimal work skills?*

3. *What training programs have the rural unemployed been exposed to in the past one or two years?*

4. *What are five or six basic work skills that would provide wide entry to the Arkansas labor force?*

5. *What might be the usefulness of a mobile skill development unit?*

6. *What would be the best approach for introducing the mobile concept for the training of the rural unemployed or marginal employed, i.e. the use of exploratory units; the involvement of the Employment Security Department, State Department of Education - Vocational Division, Vista workers, the local school superintendent or high school principal, the Arkansas Industrial Development Commission, or combinations of the above, or others?*

7. *Should mobile instruction trainees be paid?*

8. *How critical is it for a job to be available as soon as the mobile training is completed?*

9. *What percent of people trained in a marketable skill would move to another area of*

the state if a worthwhile job were guaranteed there?

10. *What vocational training resources are available for the hard core rural unemployed, i.e. vocational-tech schools, federal work programs, teaching staff, etc.?*

The above basic questions led to many excellent discussions with people who were interested in helping to solve the problem of the rural unemployed and the marginally employed. Those contacted included the following people:

State Department of Education Commissioner A. W. Ford
Associate Commissioner J. Marion Adams
Mrs. Mary McLeod, representing Governor Rockefeller
Dr. John Peterson from Governor Rockefeller's office
Mr. J. C. Ruppert, Director of Trade and Industries, State Department of Education
Mr. Fred D. McKinney, Administrator, Arkansas Employment Security Department
Mr. Loron Bolon, Director of Field Services, Arkansas Employment Security Department
Mrs. Margaret Carson, Chief of Reports and Analysis for the Arkansas Employment Security Division
Mr. John E. Brunzo, Employment Security Division, Little Rock office
Mr. Harry Blood, Little Rock Office of the Employment Security Division
Mr. George Baskin, Manager, Forrest City Employment Security Division
Mr. William P. Gardner, Manager, Russelville Employment Security Division
Mr. Harry K. McLemore, Director of Industrial Development, Little Rock Chamber of Commerce
Mr. James A. Dildy, Director Industrial and Area Development Arkansas Power and Light Company
Mr. Everett Tucker, Jr., Industrial Development Company, Little Rock, Arkansas
Superintendent Bill Irving, Forrest City
Mr. J. T. Harlo, Manager, Lerner-Slone Clothing Corporation
Mr. Ed Henderson, Director, Concerted Services in Training and Education, Forrest City

Mr. Conway Wilson, Director, Crowley's Ridge Vocational-Technical School
Superintendent Frank W. Smith, Menifee, Conway County
Dr. J. W. Hull, President, Arkansas Polytechnic College
Mr. Haynie, ARVAC, Dardanelle
Mr. Leon Coker, Pine Bluff Vocational School
Mr. Thurston Kirk, Petit Jean Vocational-Technical
Colonel Carl C. Hinkle, Arkansas Industrial Development Commission
Mr. Ray Taylor, Arkansas Industrial Development Commission
Dr. Barton Westerlund of the Industrial Research and Extension Center of the University of Arkansas
Mr. Frank Cantrell, State Chamber of Commerce

Also interviewed were a number of rural unemployed.

GENERAL SUMMARY OF INTERVIEWS AND RELATED REPORTS

Profile of Rural Low Income Family

Interviews, discussions, and the distillation of many reports and studies provided data concerning the Arkansas rural unemployed and marginally employed. In general, it appears that there are literally tens of thousands of persons who could directly benefit from training aimed at imparting a wide range of entry work skills. Significant data about low income families are shown in Tables I and II, page 8. The information is drawn from the study, "Statistical Data Regarding Incidence of Poverty for the State of Arkansas," prepared by the Arkansas Planning Commission in 1965. These data show that nearly half of Arkansas families live on less than $3,000 per year with more than one-fourth of those earning less than $1,000 in a year.

A large percent of the low income families are located in the rural areas. What are

TABLE I

NUMBER OF FAMILIES WITH INCOME LESS THAN $1,000 IN ARKANSAS, 1960

TOTAL NUMBER OF ARKANSAS FAMILIES	NUMBER OF FAMILIES WITH INCOME LESS THAN $1,000	PERCENT WITH INCOME LESS THAN $1,000
452,474	64,041	14.1

TABLE II

NUMBER OF FAMILIES WITH INCOME LESS THAN $3,000 IN ARKANSAS, 1960

TOTAL NUMBER OF ARKANSAS FAMILIES	NUMBER OF FAMILIES WITH INCOME LESS THAN $3,000	PERCENT WITH INCOME LESS THAN $3,000
452,474	215,627	47.6

the basic characteristics of these low income people? While the characteristics may vary from one area to another, as well as from family to family, in general their educational attainment level is well below the eighth grade. The rural unemployed or marginally employed have lived in marginal poverty for many years. They are comparatively isolated from the mainstream of society. Their value systems differ in many ways from those found in other regions. Their desire for education is limited primarily because schooling as presently conceived bears little relevance to their future. Because of educational limitations few have acquired vocational skills permitting them to compete for desirable jobs. Illiteracy, high dropout rates from school, adherence to outdated value systems, and lack of sophistication concerning society at large have trapped the rural low income worker in a sterile economic situation out of which he cannot hope to move without the determined help of governmental agencies.

An added problem that further stifles the low income wage earner is the recent change in the federal minimum wage law extending its provisions to farm labor. Thousands of already poor Negroes in the fertile delta area are, as a consequence, being thrown out of work. Delta cotton planters insist they cannot afford to pay the new $1.00 an hour minimum wage to day laborers. Most planters will replace farm hands by stepping up the use of chemical weed controls and by employing more machinery. Calvin Beale, a U. S. Department of Agriculture researcher, states that at least 50,000 persons are affected in the delta counties of Arkansas, Mississippi, Louisiana, and Missouri. Farm

tractor drivers will be needed and will be least affected by the minimum wage change. For a ten hour day, they will now earn $10.00. The field hands, however, will be almost entirely replaced. To add to the rural worker's plight some owners are now charging them rent and utilities for the first time. Tractor drivers, while less badly stricken than others, will see their family incomes dwindle because their wives and children will no longer work in the fields. The hardships caused by the minimum wage upheaval are not always easy to document, partly because the affected persons were already so very poor. But it is certain that the hardships are real and widespread. Thus minimum wage, intended as it was to boost the incomes of people at the bottom of the American economic ladder, is actually sweeping thousands of delta Negroes off even the lowest step.

Specific Concepts and Opinions Regarding Mobile Programs

1. *There appears to be little doubt among the people with whom investigators talked that, unless a breakthrough is made with entry work skill training for members of the rural poor, Arkansas' day of full economic development will be immeasurably delayed.*

2. *Employment security personnel, as well as others, consistently rated the low education attainment level of this group as the major deterent to their job placement.*

3. *Repeatedly during discussions and interviews, the statement was made that the only*

way to reach the rural low income earners was to develop a method by which the training could be taken directly to them.

4. *The consultants interviewed rural unemployed to gain their impressions concerning the use of mobile instruction units. All reacted favorably and indicated that the units would be well received. Out of this group of interviews emerged two salient conditions for the successful implementation of mobile training units. The first was that the units would need to be placed close to the living areas of trainees. The second condition verbalized by a large proportion of the rural people interviewed was that an opportunity to use their new skill on a paying job immediately following training would be absolutely necessary. Without such an inducement their interest would be small, their perseverence little.*

5. *A question asked of the unemployed as well as the rest of the people contacted for this study was -- should pay be granted for participating in the mobile vocational training program? The consultants were pleasantly surprised that there was great agreement that no pay should be granted because the opportunity to learn an entry work skill in a short period of time was enough incentive to participants. Trainees learning without pay would give the added assurance that participants were genuinely motivated to enter the work world and not simply interested in the training stipend.*

6. *There is a clear lack of consensus among all persons interviewed, as well as in some published reports, concerning the willingness of persons following training to move to another part of the state for a job. Some reports indicated that people would make such a move. A number of Employment Security personnel thought that persons would not move far, if at all. Personal interviews with some unemployed indicated that they would probably not move a great distance for a job. It is possible, of course, that the introduction of mobile training facilities could give impetus to a new dimension of social mobility as graduates seek jobs at which to use their new skills.*

7. *Many statements were offered concerning the kinds of entry work skills that would be most beneficial to the prospective trainees. Those most frequently mentioned were as follows; (1) power sewing machine operators, (2) small appliance repair, (3) motel service, (4) hospital service, (5) nursing home service, (6) industry mechanics helper, (7) small gas engine repair, (8) service station attendant, (9) farm machinery maintenance, and (10) steam clothes pressing operator. Recent reports from Employment Security Departments dealing with work opportunity statistics sustain the above categories.*

Will There Be Jobs for Those Trained Only in Basic Work Skills?

As a result of much discussion and research it appears certain that there are work en-

try jobs available now and in the future. The number of such opportunities will markedly increase. The basis for this assumption comes partly from data emerging from a study by the Industrial Research and Extension Center - University of Arkansas. In that study indicators pointed to as many as 154,000 new jobs developing by 1980. Table III, page 13, summarizes this information by broad occupational groups. All groups, it will be seen, are expected to increase in number, with the one category of agriculture excepted. The latter industry will, in fact, lose more than 24,000 workers by 1980. This fact alone is perhaps, the most compelling reason to focus now on the training of the rural unemployed and rural marginally employed.

Table III indicates that approximately 31,000 new professional and technical positions will become available in Arkansas by 1980. Yet all states and regions will be competing fiercely for persons with advanced training and there is little question but what Arkansas will be better able to bargain for these people if it improves its economic standing at all levels. Many people in the present labor force are underemployed having no more than entry work skills, but with additional training, could readily fill the many higher work skill jobs of the future. Arkansas will have to depend largely upon these people to fill most of the approximately 31,000 new professional and technical jobs as well as the 34,836 operative jobs and a great many of the 51,489 new clerical positions.

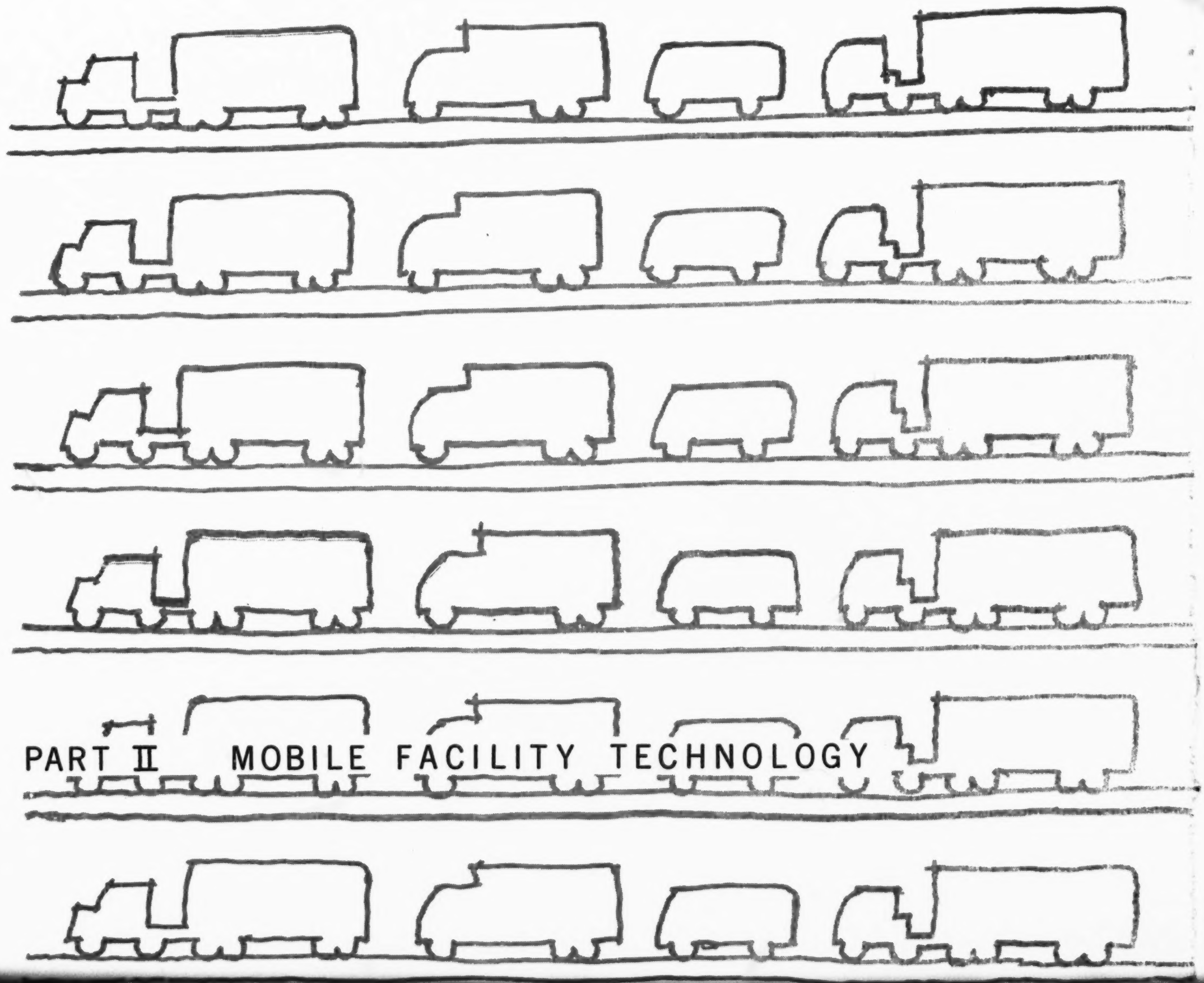
With these people upgrading their work skill potential and vacating their present en-

TABLE III

ARKANSAS' PROJECTED SKILL NEEDS BY OCCUPATIONAL GROUP - 1980

Occupational Group	Additional Work Stations by 1980
Total	153,740
Professional and Technical	31,040
Managerial	11,170
Clerical	51,489
Sales Workers	13,591
Craftsmen	23,499
Operatives	34,836
Laborers	5,284
Service Workers	6,761
Farmers & Farm Workers	-24,200

try work skill jobs, it could well be assumed that even more entry work skill jobs will be available than the number now projected from 1967 through the year 1980. Still another group of data that strengthens the assumption that a great groundswell of entry level work positions will develop in the future are indicated in both the recent Area Skill Survey studies and the Manpower Resources Reports, by county, from the Smaller Communities Program -- both prepared by the Arkansas Employment Security Division.



PART II MOBILE FACILITY TECHNOLOGY

The concept of a mobile approach to education is annually gaining wider acceptance. There are hundreds of mobile educational units in use throughout the United States. A number of these mobile facilities are presently in use in the State of Arkansas.

After contacting some of the companies which develop and construct all types of mobile facilities, the consultants discovered that, like all products, there are various types of mobile facilities, each available at a different cost. They also learned that there have been some unsuccessful ventures in the use of a mobile approach to education. It appears that certain guidelines must be followed to insure the success of the mobile facility approach. Mr. Frank Carioti, a mobile facility consultant, at a recent meeting in West Virginia, warned mobile facility planners to beware of two pitfalls: (1) developing a mobile unit that would take so long to set up in the field that it would not be practical, and (2) the use of inexpensive "mobile home" type trailers that are not constructed to withstand the stress of constant moving typically associated with most mobile facility programs.

Wheeler's Study

The most complete study of the present nationwide status of mobile facilities was published in December 1966, by the Architectural Engineering Department of the Pennsylvania State University for the Appalachia Educational Laboratory, Inc., Charleston, West Virginia. The principal investigator, Dr. Herbert Wheeler, obtained information from

a search of relevant literature and a letter survey of some 185 sources, including project directors, equipment manufacturers, and educators at the state and local levels. The following is a summary of his study.

1. *Broad Interest in Mobile Units - Published literature includes many articles and books over the last ten years dealing with the mobile concept.*

2. *Used Nationally - Thirty-six states are using the mobile concept with educational projects of one sort or another.*

3. *Fleets of Mobile Units - It is not uncommon for projects to utilize several mobile units, each carrying on a separate mission within the plan of a single project.*

4. *Broad Base for Mobile Unit Utilization - Mobile units are used in a multitude of educational areas. Wide use of mobile facilities has been achieved in the basic education areas of reading, mathematics, speech, and language.*

5. *Teacher Training - Several states have developed mobile units to provide teacher training or the in-service training of instructors.*

6. *Semi-educational Functions - Units have also been used for cultural and commercial exhibits as well as for medical clinics.*

7. *Manufacturing Mobile Unit Equipment - No fewer than nineteen manufacturing firms*

are currently producing various types of mobile units.

8. *Bookmobiles - A proven and especially successful use for mobile equipment is the bookmobile. Over three hundred are being used throughout the country.*

9. *Medical mobile units - Several state and national health agencies use different types of mobile coaches and trailers for medical clinics, laboratories, and hygiene units.*

10. *Mobile Military Units - The military has successfully utilized the mobile concept for radar, communications, electronics, command posts and medical purposes.*

11. *Relocatable Classrooms - In fast growing school districts, the mobile facility has been used to provide learning areas while permanent facilities were being constructed. These wheeled classrooms have also proven uniquely valuable in the large school district with sparse population because they permit a special unit to be rolled from site to site with ease and economy.*

12. *Educational Experiments - Almost all of the mobile units appear to be parts of experimental educational projects designed to improve the educational opportunities for the students they serve.*

13. *Rural Uses - Not surprisingly, mobile units are more extensively used in rural areas than in densely populated ones.*

Selected Examples of Operative Mobile Units

Wheeler's Study also described seventy-seven specific mobile projects throughout the U. S. The following are selected examples of mobile facilities that have characteristics similar to the mobile facility contemplated for use in Arkansas.

1. *PHOENIX, ARIZONA - Arizona Department of Public Instruction*

MOBILE INSTRUCTIONAL LABORATORIES

Two types of mobile units are being used in a State-wide Adult Basic Education program. One unit is approximately thirty feet long and eight feet wide and seats eighteen students in carrel-type desks running the length of each wall. The desk positions are wired to an audio-active language lab console located near the front of the vehicle. Over-head projector, controlled reader, language master, controlled image projector, tape recorder and other items of audio-visual equipment are used by the teacher and several technician aides assigned to the unit. The second unit is a smaller four wheel drive vehicle which can transport both equipment and teacher over rough roads like "a submarine operates from a submarine tender." The language lab is a vital educational tool because.... "Arizona has a tremendous second language problem with students in the adult literacy program. In addition to Spanish, there are thirteen indigenous Indian languages."

2. *LITTLE ROCK, ARKANSAS - Arkansas Arts Center*

ARTMOBILE

A trailer type "art-gallery-on-wheels" is pulled to schools by a tractor driven by its own curator or a professional driver. To date, the artmobile has visited 159 communities and attendance has soared over 400,000. The Artmobile requires a level site, at least thirty-five feet wide by seventy-five feet long with electrical service connections. Because it expands and forms an exhibit area with a circulation pattern, it needs a twenty-five foot vertical clearance. It has been one of the best received educational innovations to be presented to the people of the state in recent years.

3. *DENVER, COLORADO - Colorado Department of Education*

MOBILAB FOR INSERVICE SCIENCE EDUCATION

A laboratory 32 feet long is equipped for the in-service education of elementary and junior high teachers in science and related fields (including modern mathematics). In addition to equipment for performing experiments, the Mobilab contains a curriculum and reference library in science and mathematics and a collection of basic audio-visual aids. The Mobilab will visit school districts and give instruction to teachers for periods ranging from one day to a week. The Mobilab has twelve workbench stations and during a normal program it will offer two sessions per day.

4. *SPRINGFIELD, ILLINOIS - Illinois State Superintendent of Public Instruction*

MOBILE VOCATIONAL GUIDANCE UNITS

Self-propelled, coach-type units are traveling in twelve counties in southern Illinois providing guidance counseling needs to the following: (a) non-college bound high school seniors, (b) young unemployed people who have graduated from high school in the past three years, and (c) young people who have dropped out of school. School officials report that the guidance counselor has already been a great help.

5. *BEDFORD, INDIANA - Four-County Consortium including the North Lawrence Community Schools*

MOBILE COUNSELING CENTER

A mobile counseling unit complete with staff and equipment rotates between each of seventeen high schools in the rural area of southern Indiana and provides economical guidance services to supplement those existing in the four counties. Dropout rates, absenteeism, and educational and vocational aspirations will be assessed and the attitudes of teachers, students, and parents will be surveyed to determine the effectiveness of education. A trailer unit, forty feet long and ten feet wide, is outfitted with three tape recorders, counselor reference books, testing materials, desk chairs, and other necessary equipment. The trailer unit will be drawn from school to school by a truck unit, and the staff, made up of faculty from the Counseling

Center of Indiana University, drives from Bloomington to the schools each day in a six passenger station wagon.

6. *MUNCIE, INDIANA - Muncie Community Schools*

ART-MOBILE

An art-mobile, fifty feet long and ten feet wide, was developed by the Ball State University Art Department as a part of its Cultural Enrichment Program to provide new or improved art enrichment experiences. The Art-mobile, manned by students from the Ball State Art Department and fitted with a display of art objects from Ball State, visits schools in the district where children are given the opportunity of viewing varied works of art. The trailer unit is transported, between its display dates, by a commercial moving company.

7. *DETROIT, MICHIGAN - Detroit Institute of Arts*

MOBILE ART GALLERY

A three-year old van-type mobile unit, eight feet wide and fifty feet long, provides a gallery area thirty-two feet long and is equipped with pegboards for easy hanging of pictures. The art mobile travels during a five and one half month season and visits forty cities within the state.

8. *LANSING, MICHIGAN - Michigan Historical Commission*

HISTORYMOBILE

A fifty-four foot long trailer unit custom-made at a cost of $50,000 houses

an exhibit of the history of Michigan. Beginning its tour in April and ending in November of each year, the mobile unit visited fifty-nine communities and traveled thousand of miles making it possible for 116,000 people to see the exhibits.

9. *HELENA, MONTANA - Montana Department of Public Instruction*

MOBILE MATHEMATICS - SCIENCE TEACHING UNIT

A twenty-three foot trailer laboratory is taken from school to school for a stay of several days. It is designed and equipped for in-service education of elementary and junior high teachers in mathematics and science. It has a myriad of equipment for carrying out experiments, contains a curriculum and reference library in both fields, and houses a collection of basic audio-visual aids. No charge is made to schools for use of the laboratory which has been in operation since 1961. The state department of education, pleased with this initial mobile facility, is now investigating the possibility of a reading laboratory designed and utilized in a similar fashion.

10. *PHILADELPHIA, PENNSYLVANIA - Franklin Institute*

TRAVELING SCIENCE EDUCATION VANS

A rugged cargo van carries lecture-demonstrations to schools throughout Pennsylvania communities. Over 45,000 students witnessed the "Expedition in Science" lectures in the first five months of operation.

11. *OAK RIDGE, TENNESSEE - Oak Ridge Associated Universities*

MOBILE RADIOISOTOPE TRAINING LABORATORY

Three mobile laboratories travel to small colleges throughout U. S. to provide lecture demonstrations for two week periods. The trailer units are thirty-seven feet long and are hauled by tractors.

12. *RICHMOND, VIRGINIA - Virginia Museum of Fine Arts*

GALLERIES-ON-WHEELS

Four huge galleries-on-wheels carry seven exhibits of original art to Virginians during a season. The larger mobile units are truck-trailer units forty-four feet long (cab included). When set up on a site, the gallery opens out to cover an area fifty-one feet long and twenty-two feet wide.

PART III RECOMMENDATIONS

Based upon the findings by the consultants while appraising the situation in Arkansas, an assessment of the status of the people to be served by the proposed mobile training units, the "history" of success of the effective utilization of mobile units for educational purposes in other states, and the encouragement received by officials of the many agencies that were contacted, the consultants believe strongly that the mobile unit approach to developing skills is feasible. Therefore, the following recommendations are made.

I. A one year pilot study should be implemented to field-test a mobile facility training program for rural low income wage earners, the unemployed and the unskilled.

II. Six months should be allowed for the development and design of the specific components of the training program and construction of the mobile facilities.

III. Two mobile units should be prepared for the field test: (1) One unit should be designed primarily as an exploratory unit which would provide prospective trainees with exposure to a number of training possibilities for entry type work skills. This unit would serve as a "recruiter" unit for those skills offered by the mobile training unit, as well as the programs offered at the various vocational-technical centers. The consultants learned through conferences with many people that a good percentage of the people to be served, as well as public school educators, are relatively unaware of the variety of skill offerings that

are provided in the vocational-technical centers. (2) A second unit would be designed to house two training module clusters where the actual training for specific skills would be undertaken. The second unit would follow the route of the exploratory unit and should be designed to change quickly from one work cluster training module to another. This last would depend upon the demands established by the prospective trainees during the preliminary visit to their locale by the exploratory unit. A high degree of flexibility in the mobile facility design is imperative. The advance visit of the exploratory type unit would determine the number of people interested and the type of skill training in which they are interested. Advance publicity of the "recruiter" unit's visit is a necessity, as well as the employment of the resources of the agencies in the community, such as Employment Security Division, the Superintendent of the local school district, etc., to notify and make referrals of the unemployed people and high school dropouts, particularly. Additionally, the "explorer-recruiter" mobile unit should be designed such that when it is no longer needed for this purpose it could be easily converted to a training mobile unit.

IV. *The pilot project should be administered by the State Department of Education - Vocational Division. As of September 1967 the State Board for Vocational Education will have ten area vocational-technical schools in operation. These schools, distributed throughout the state, in the estimate of the consultants,*

could readily serve as operations and maintenance bases for the satellite mobile facilities.

V. *To reach the greatest number of trainees, it is recommended that the work skill clusters presented on the following pages be programmed for the pilot study. The clusters selected by the consultants reflect information gathered from a variety of sources. These were indicated as being the more "pronounced" skills that are in demand by industry and other categories of employment. It is to be noted that these clusters are on the entry occupational skill level and will afford the greatest number of people an opportunity to move into new work skill areas.*

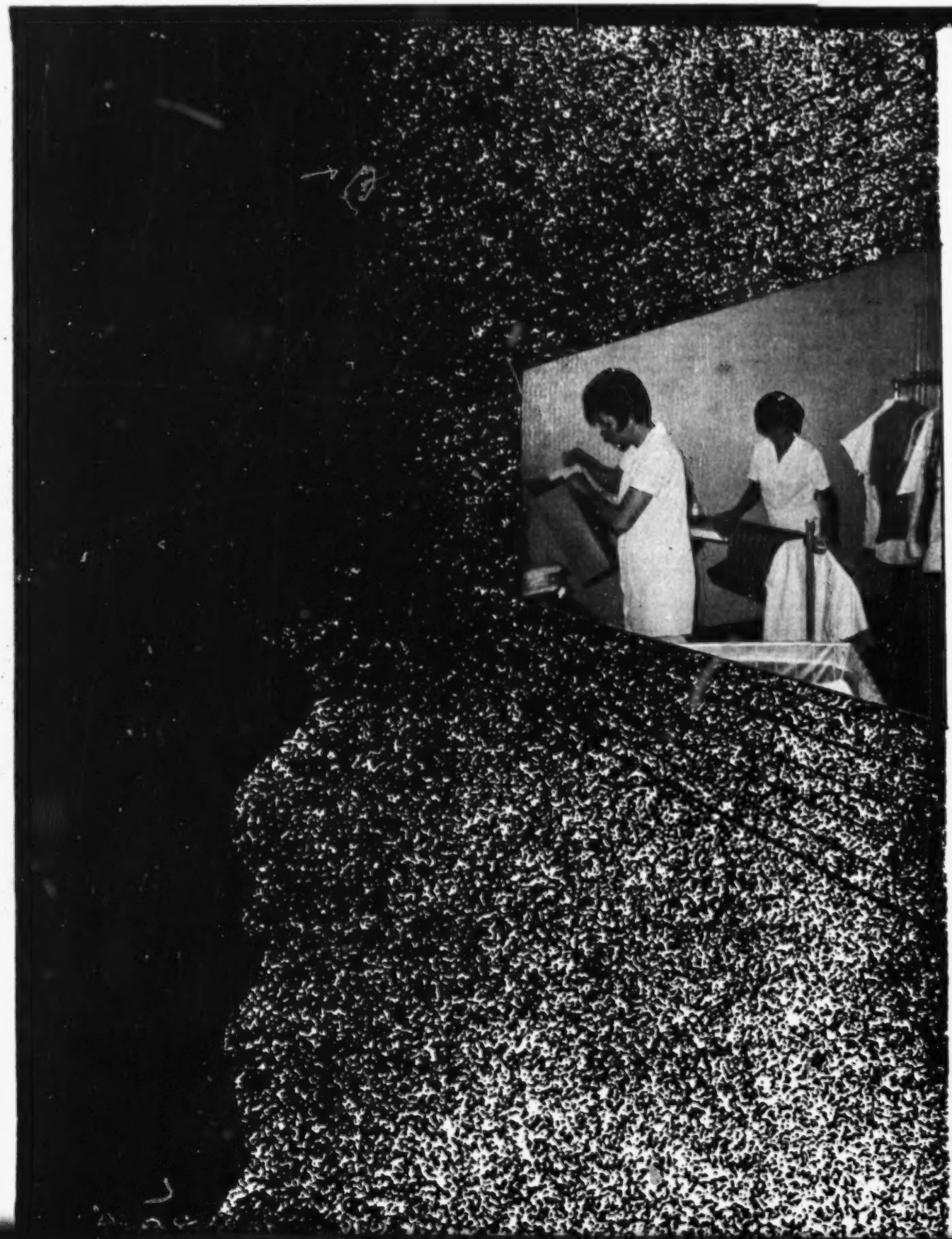
JOB CLUSTER A.

HOUSEHOLD APPLIANCE REPAIR

The use of electrical appliances is universal; the need for repairmen to keep them functioning is increasing. Needed especially are persons who are skilled in repairing portable household electrical applicances such as fans, heaters, vacuum cleaners, toasters, and flatirons. Such workers must be skilled in the techniques necessary for removing defective parts, in the use of power screwdrivers, soldering irons and handtools. They also must be able to install new parts and reassemble the appliance.

It may be possible to become proficient as a small applicance repairman with a minimum of reading and writing skill. Workers should be able to record the nature of the repair in a log, or on a mechanical counting device. Some knowledge of written communications would be necessary in order to maintain records of stock and replacement parts.

Other operations will involve testing and examining parts for defects, also filing or bending parts to remove burrs or improving alignment and fit. The worker may also use a buffing or polishing wheel to remove scratches from metal surfaces, and he may find it necessary to touch up paint defects, using a brush or spray gun.



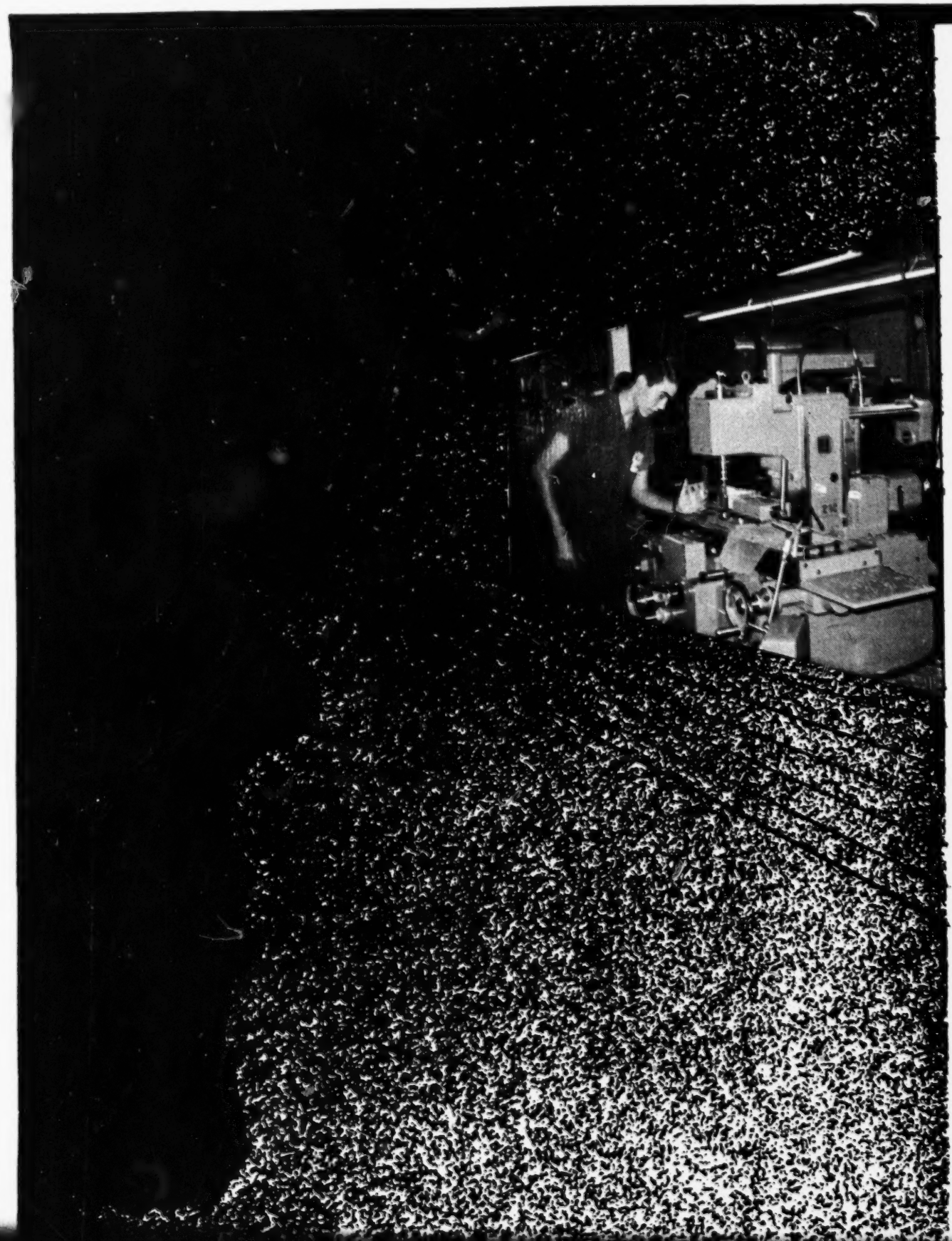
JOB CLUSTER B.

GARMENT AND DRY CLEANING INDUSTRY

The garment, as well as the dry cleaning industry, provides many job opportunities for workers who have acquired minimal skills in various operations. Garments must be examined for workmanship and conformity to standards; imperfections, such as material flaws, stains, poor seaming, and faulty pressing must be detected and corrections made. Garments must also be folded for bagging or boxing with folds secured by using pins or metal clips.

While some workers are employed as garment rippers devoting most of their working hours to cutting or ripping stitches from sections of garments to be altered, others are menders who are concerned with repairing defects such as holes, runs, and pulled threads in knitted garments. Still others are needed for tending machines that reduce rags and yarn waste to fiber for reuse. The major skill, however, is that of operating a power sewing machine.

Skills in the use of roller and flatirons, steam presses, removing stains, and some knowledge of dyes will enhance the marketability of related skills in both industries.



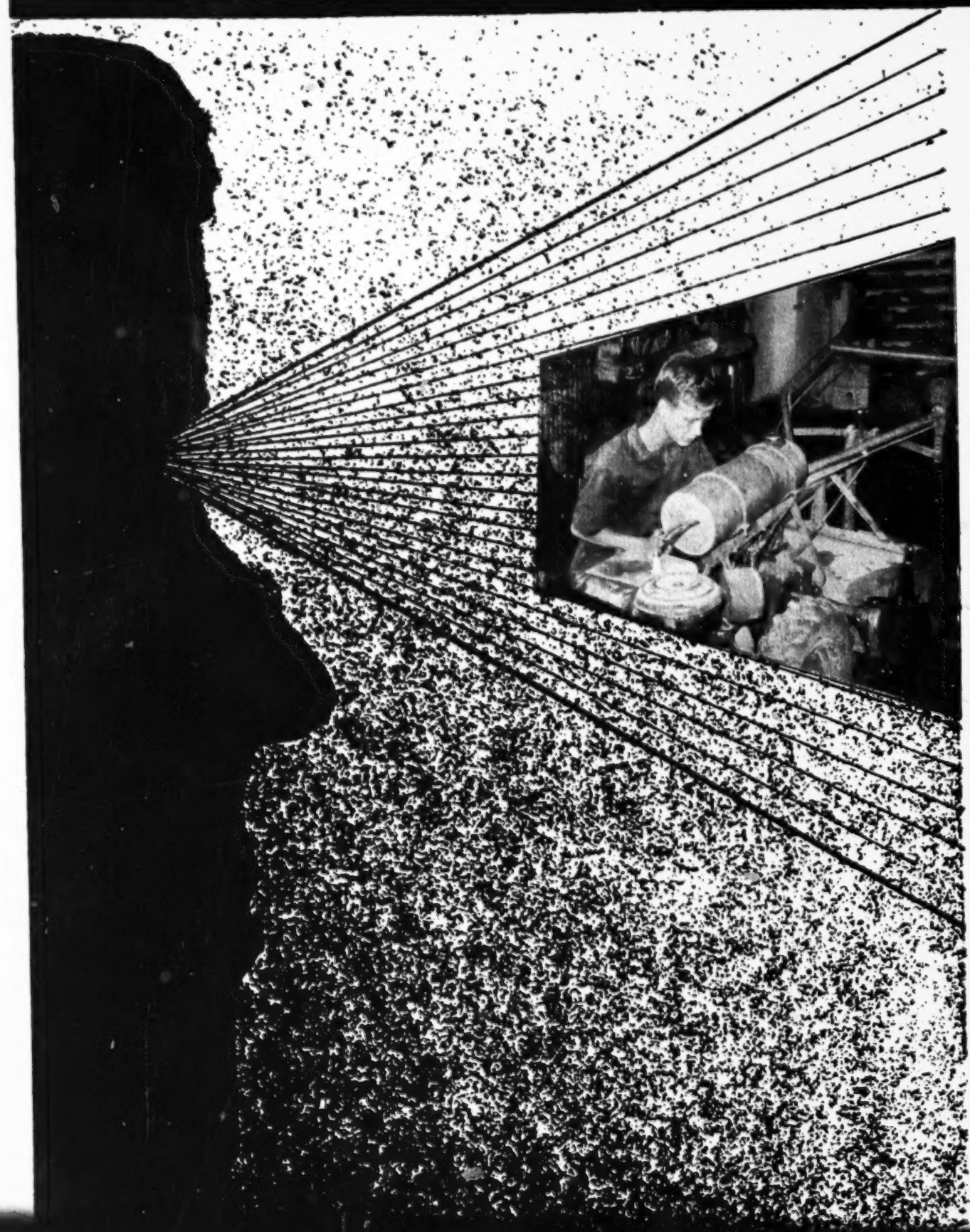
JOB CLUSTER C.

GENERAL MANUFACTURING MECHANIC'S HELPER

The industrial revolution has left in its wake a wide array of mechanical equipment that has replaced much of Arkansas' muscle power. In order to keep these machines operational, skilled hands must replace worn parts, make repairs when necessary, and apply preventive maintenance. Different skill levels are needed to keep the wide assortment of wheels turning.

This cluster would provide skills aimed at qualifying the worker to assist the machinist, the technician and, in some cases, the engineer. The worker would operate such machine tools as the lathe, drill press, grinder, buffer, saw, and other tools used for the shaping and forming of metals, plastics, and wood. He would assist in repairing and remodeling functional parts of mechanical equipment and machinery, such as pumps, compressors, pipe-laying machines, and ditch-diggers. Many men will be needed in factories where they would be engaged in using hoists, handtools, gauges, drills, grinding wheels, and testing devices.

The job possibilities for the mechanic's helper who is skilled in the use of basic shaping and forming tools are looming larger every year.

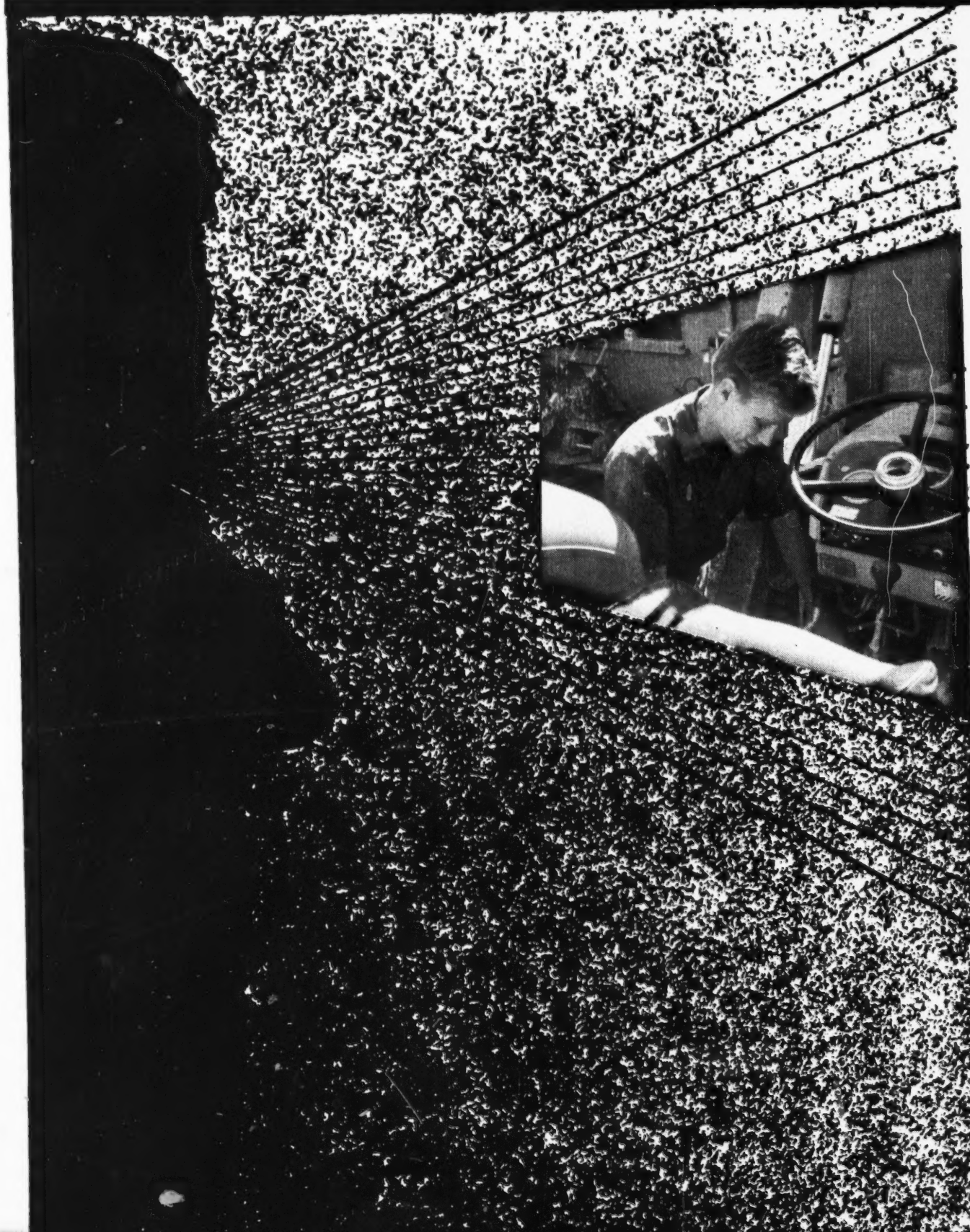


JOB CLUSTER D.

SMALL GASOLINE-ENGINE REPAIR

Internal combustion engines have a great variety of uses in Arkansas and the problem of keeping them running will depend largely upon persons who have a basic understanding of their function. The need for persons who are skilled in repairing fractional-horsepower gasoline engines used to power boats, lawn mowers, brushsaws, garden tractors, and similar machines is expected to expand as gasoline engines are pressed into service in ever-increasing numbers.

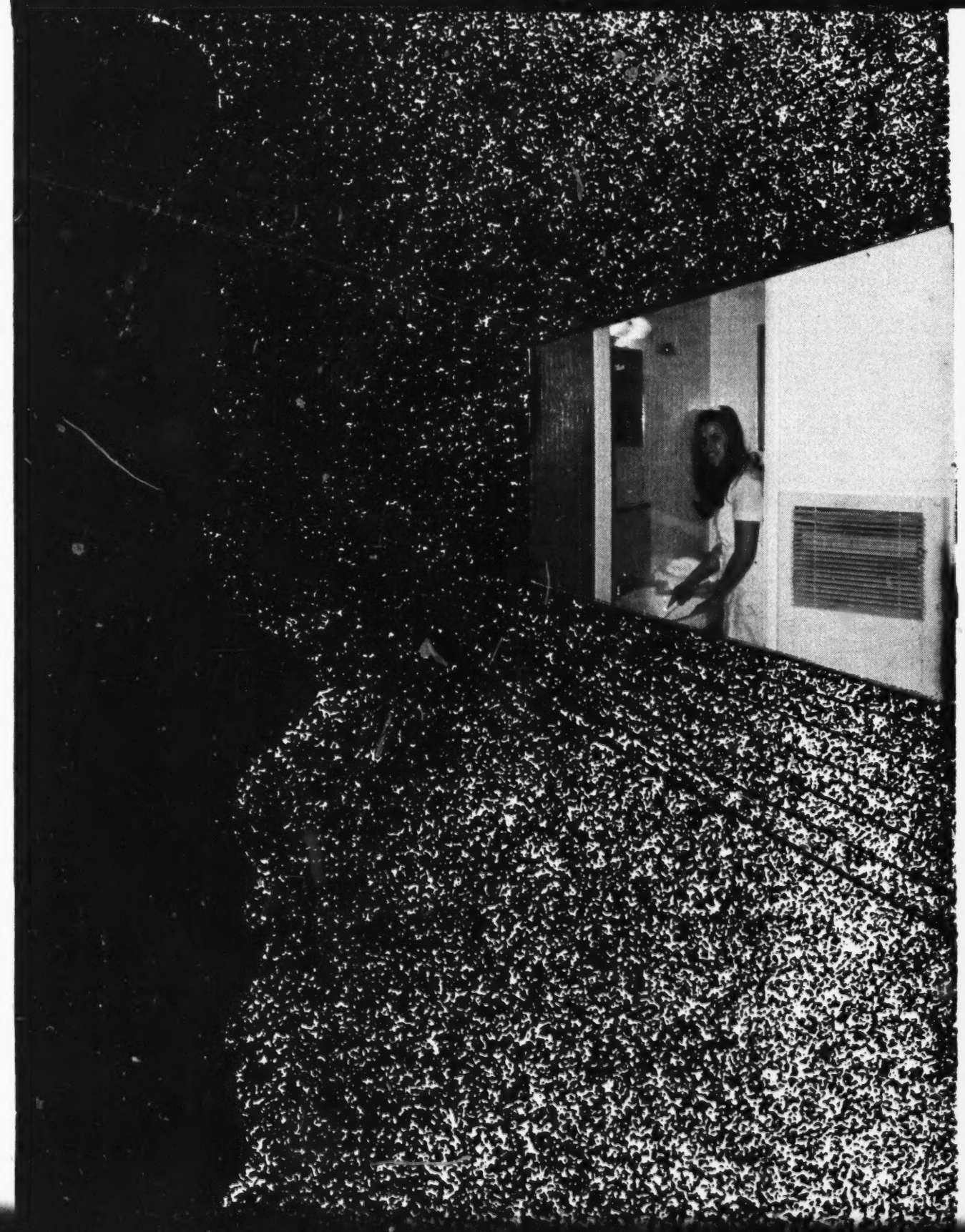
The gasoline engine repairman would locate causes of trouble, using handtools and instruments. He would dismantle engines in order to examine the parts for defects and wear. He would also replace or repair parts, such as rings or bearings, using a variety of handtools. As he develops proficiency as a repairman, he would be called upon for "trouble shooting" and locating malfunctioning parts. Such jobs as cleaning and adjusting carburetors and magnetos would become routine.



JOB CLUSTER E.

FARM EQUIPMENT MAINTENANCE

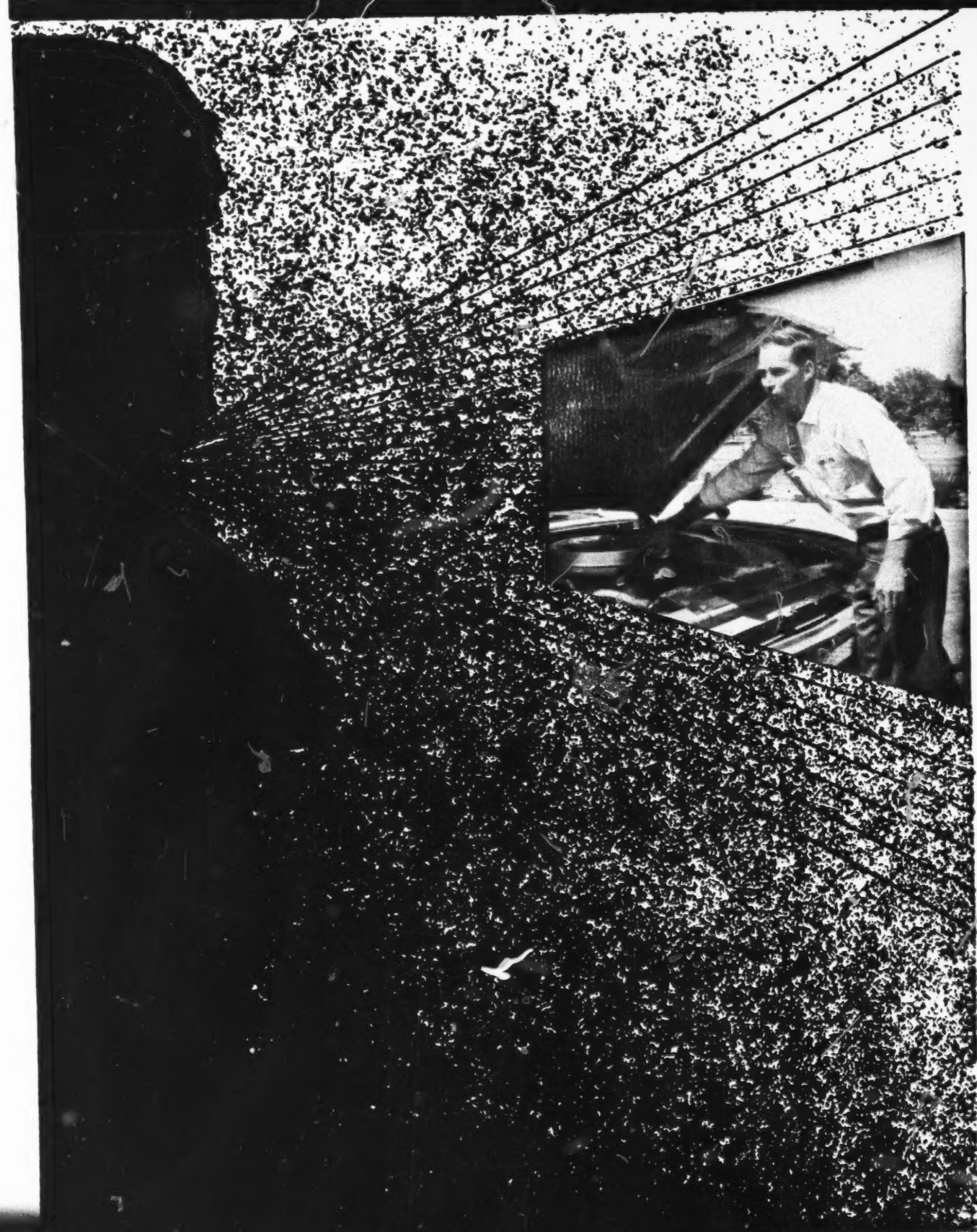
The maintenance of many pieces of farm machinery can most effectively be learned through a combination of on-the-job training and formal instruction. Such a worker adjusts, services, and makes minor repairs on farm vehicles, machinery, and equipment, including tractors, trucks, automobiles, harvesters, combines, silo fillers, plows, and similar equipment, using many types of handtools. He observes and examines machinery and their component parts in operation to detect malfunctioning or defective elements. He also replaces components, such as carburetors, fuel pumps, generators, ignition points, and sparkplugs. He adjusts the timing of motors, lubricates, washes, paints, and cleans vehicles and attachments with the use of handtools.



JOB CLUSTER F.

MOTEL, HOSPITAL, AND NURSING HOME HOUSEKEEPER

No machine has yet been devised to replace the efficient housekeeper who attends to the dozens of daily tasks in motels, hospitals, and nursing homes. She cleans hospital wards, rooms, baths, laboratories, offices, and halls. She mops and waxes floors. Window sills, woodwork, and furniture must also be kept clean. She also scours and polishes bathtubs, sinks, and laboratory equipment. She washes bedframes, brushes mattresses, and remakes beds when patients or guests move on. She sweeps and mops floors, vacuums carpets, dusts furniture, using broom, mop, vacuum cleaner, brushes, sponges, cloths, detergents, polish and disinfectant solutions. On occasion she is called upon to check wraps and render personal assistance to patrons. Or, she may serve patients meals and remove trays and dishes. The housekeeper may be expected to wash linens and other garments by hand or machine, and to mend and iron clothing, linens, and other institutional articles, using hand iron or electrical iron. The need for conscientious housekeepers is growing with an expanding tourist industry and with the mushrooming of nursing homes given recent impetus by the passage of Medicare.



JOB CLUSTER G.

SERVICE STATION ATTENDANT

With the increase in automobile, truck, bus, and other vehicle ownership, the need for roadside service to provide them with fuel, lubricants, and accessories is also growing. While the chief function of the attendant is to fill fuel tanks of vehicles with gasoline or diesel fuel to levels specified by customers, they must also report the level of oil in crankcase and the amount of water in radiators to the operator, as well as to be prepared to add required amounts of oil and water. It may also be necessary to add water to the battery and to wash the windshield. Other facets of the job require that the attendant lubricate the vehicle and change the motor oil. He may also be asked to replace accessories, such as oil filter, air filter, windshield-wiper blades, fuses and fan belt. He installs antifreeze and changes spark plugs, and repairs or replaces tires.

Additional requirements for service station attendant are those of being skillful in meeting and dealing with the public, knowledgeable in terms of use of credit cards, and effectiveness in handling cash receipts.

VI. *The State Department of Education - Vocational Division - should develop a "pool" of instructors for the training program. The Department could well turn to (1) industry and (2) area vocational-technical school personnel for staffing purposes.*

VII. *A Director for the mobile unit project should be employed. This individual should be broadly qualified and possess a breadth of knowledge concerning the total vocational-technical training opportunities existent in the state. His primary assignment would be with the explorer-recruiter unit. Additionally, he would be responsible for scheduling and coordinating the activities of the mobile training unit. Past experience as a vocational-technical counselor would be desirable.*

VIII. *The State Department should consider utilizing the instructor(s) in a dual capacity, also relying on him as a driver-maintenance man for the mobile units.*

IX. *It is proposed that the pilot project be implemented initially in two areas of the state. Field testing should be directed to the rural area surrounding Forrest City and the rural area surrounding Russelville.*

X. *The State Department of Education - Vocational Division - should work in close cooperation with all agencies of the government, both state and local, that are*

involved with training and employment, such as: (a) state and local Employment Security Departments, (b) ARVAC, and (c) the OEO program, to provide for the greatest acceptance possible of the mobile facility program by those persons who might participate.

XI. A consulting team of program and training specialists, mobile facility designers, and research design evaluators should (a) develop specific program and training materials, (b) design and construct the mobile facility, (c) supervise the program, and (d) develop an instrument to evaluate the results of the year's field test.

XII. The following is a proposed budget for the Mobile Facility Program field test.

A. Personnel

(1) Director, Exploratory and Instructional Units

One year	@	$11,000.00

(2) Secretarial Services

Eighteen months	@	6,000.00

(3) Combination of Teaching Staff from Industry, Area Vocational Schools, Local School Districts, and State Department of Education

One year	@	20,000.00

(4) Consultant Team

(a) Program and media designers

Sixty days @ $100 per day	6,000.00

(b) Architectural mobile facility designers	$ 6,000.00
(c) Two consulting mobile designers	
Twenty days @ $125 per day	2,500.00
(d) Two project evaluators	
Forty days @ $100 per day	4,000.00
B. Mobile Facility Construction Costs	
(1) Includes facility, equipment, and mobile power unit	
Two @ $45,000 each	90,000.00
C. Program Materials	
(1) Trainees' use of materials	
360 students for year project	
@ $25 per student	9,000.00
(2) Instructors' use of materials for training to include many training media	2,000.00
D. Travel	
(1) Transporting two mobile units @ 20¢ per mile for a total of 5,000 miles	1,000.00
(2) Travel and per diem for consultant team for eighteen months	11,000.00
E. State Department of Education Contingency Fund Telephone, insurance, maintenance of mobile units, publicity program	2,200.00

F. Publishing Final Project Report

(1) Printing and Material for 500 copies	$ 500.00
(2) Writing and compiling report Ten days @ $100 per day	1,000.00
TOTAL	$172,200.00

XIII. Foundation and/or U. S. Office of Education funds should be sought for the field test project. When the concept is proven in the field, fiscal support by the State should be appropriated.

XIV. The consultants hold the view that the schedule of the mobile training unit should be flexible in terms of its utilization to the extent that in instances, and as deemed desirable, the unit could be utilized to train workers for an industry that is locating in Arkansas or to up-grade the skills of workers that are presently employed in an industry that has plans for expansion.

BIBLIOGRAPHY

Area Skill Survey: Little Rock - North Little Rock Metropolitan Area. Reports and Analysis Section, Arkansas Employment Security Division, Little Rock. October, 1965.

Arkansas Labor Force Data, 1964-1965. Reports and Analysis Section, Employment Security Division. Little Rock. August, 1966.

Manpower Resources Report I: St. Francis County, Summary of Applicant Occupational Categories. Arkansas Smaller Communities Program, Arkansas Employment Security Division, Little Rock. September, 1966.

Manpower Resources Report I: Franklin County, Area Work Force Data. Arkansas Smaller Communities Program, Arkansas Employment Security Division, Little Rock. January, 1967.

Manpower Resources Report II: St. Francis County, Industrial Staffing Patterns Related to Applicant Occupational Inventory. Arkansas Smaller Communities Program, Arkansas Employment Security Division, Little Rock. October, 1966.

Manpower Resources Report IV: St. Francis County, Area Work Force Data. Arkansas Smaller Communities Program, Arkansas Employment Security Division, Little Rock. October, 1966.

Modular Training and Educational Laboratories. Conductron Corporation, St. Charles, Missouri.

Roberts, Roy W. *Vocational Education and Training in Arkansas*. Industrial Research and Extension Center, University of Arkansas, Little Rock. February, 1967. (Mimeographed)

Statistical Data Regarding Incidence of Poverty for the State of Arkansas. Arkansas Planning Commission. Little Rock. 1965.

Total Progress Report; St. Francis County, Arkansas. Edgar Henderson, Jr., Coordinator, Concerted Services in Training and Education. Forrest City, Arkansas. January, 1967.

Traveling Educational Units. Architectural Engineering Department, Pennsylvania State University, University Park, Pennsylvania. December, 1966. (Mimeographed)

Wheeler, Herbert C., Jr. *Traveling and Transportable Educational Units*. College of Engineering, Pennsylvania State University, University Park, Pennsylvania. March, 1967. (Mimeographed)